

PATENT  
Atty. Dkt. No. APPM/006766/CPI/L/B/PJS

## REMARKS

This is intended as a full and complete response to the Office Action dated August 10, 2005, having a shortened statutory period for response set to expire on November 10, 2005. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-4, 7-8, 11-13, 15 and 21-30 remain pending in the application upon entry of this response. Claims 5-6, 9-10, 14 and 16-20 have been cancelled without prejudice and claims 21-30 have been added by the Applicant. Claims 1-4, 7-8, 11-13 and 15 stand rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

The Examiner has restricted the claims under 35 U.S.C. § 121 to Group I containing claims 1-15 and Group II containing claims 16-20. The Applicant elects Group I containing presently pending claims 1-4, 7-8, 11-13 and 15. Claims 16-20 have been cancelled without prejudice.

Claim 14 was rejected under 35 U.S.C. § 112, first paragraph. Claim 14 has been cancelled; therefore, the rejection is moot.

Claims 1-4, 7-8, 11-13 and 15 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 and 10-16 of co-pending Application No. 10/281,079 in view of *Carducci et al.*, U.S. Patent No. 6,716,302 (herein, "*Carducci*").

Claims 1 and 7 have been amended by the Applicant. The Applicant respectfully traverses the rejection in view of the presently amended claims. Claims 1 and 7, and claims 2-4, 8, 11-13 and 15 dependant thereon, have a different claim scope than the original claims that the Examiner provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

Claims 1-4, 7-8, 11-13 and 15 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-51 of co-pending Application No. 10/894,774 in view of *Carducci*.

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Claims 1 and 7 have been amended by the Applicant. The Applicant respectfully traverses the rejection in view of the presently amended claims. Claims 1 and 7, and claims 2-4, 8, 11-13 and 15 dependant thereon, have a different claim scope than the original claims that the Examiner provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

Claims 1-4, 7-8, 11-13 and 15 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-35 of co-pending Application No. 10/268,438 in view of *Carducci*.

Claims 1 and 7 have been amended by the Applicant. The Applicant respectfully traverses the rejection in view of the presently amended claims. Claims 1 and 7, and claims 2-4, 8, 11-13 and 15 dependant thereon, have a different claim scope than the original claims that the Examiner provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

Claims 1-4, 7-8, 11-13 and 15 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-14, 24-27, 42-48, 61-69, 83-88 and 95-100 of co-pending Application No. 10/241,373 in view of *Carducci*.

Claims 1 and 7 have been amended by the Applicant. The Applicant respectfully traverses the rejection in view of the presently amended claims. Claims 1 and 7, and claims 2-4, 8, 11-13 and 15 dependant thereon, have a different claim scope than the original claims that the Examiner provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

Claims 1-4, 7-8, 11-13 and 15 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of *Chen et al.*, U.S. Patent No. 6,916,398 (herein, "*Chen*") in view of *Carducci*.

Claims 1 and 7 have been amended by the Applicant. The Applicant respectfully traverses the rejection in view of the presently amended claims. Claims 1 and 7, and

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claims 2-4, 8, 11-13 and 15 dependant thereon, have a different claim scope than the original claims that the Examiner provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

Claims 1-4, 7-8 and 11-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *Chen*. The Examiner asserts that *Chen* discloses the claimed invention. The Applicant respectfully traverses the rejection.

*Chen* discloses a gas delivery assembly for atomic layer deposition. *Chen* does not teach, show or suggest an apparatus for performing multiple deposition processes, comprising a chamber body, a lid assembly attached to the chamber body, a first gas distribution assembly coupled to the lid assembly and configured for a cyclical layer deposition process, comprising a gas conduit positioned on and extending through the lid assembly and having an expanding channel in fluid communication with the chamber body, a first gas inlet and a second gas inlet positioned on the gas conduit to form a circular gas flow pattern within the gas conduit, and a first high speed actuating valve coupled to the first gas inlet, a second high speed actuating valve coupled to the second gas inlet and the first and second high speed actuating valves are configured to sequentially pulse a first gas and a second gas during the cyclical layer deposition process, and a second gas distribution assembly coupled to the lid assembly and configured for a chemical vapor deposition process, comprising an annular mixing channel in fluid communication with the gas conduit and adapted to deliver a continuous flow of one or more compounds into the gas conduit during the chemical vapor deposition process, as recited in claim 1, and claims dependant thereon.

Also, *Chen* does not teach, show or suggest an apparatus for performing multiple deposition processes, comprising a chamber body, a lid assembly attached to the chamber body, a first gas distribution assembly coupled to the lid assembly and configured for a cyclical layer deposition process, comprising a gas conduit in fluid communication with the chamber body positioned on and extending through the lid assembly, at least two flow paths in fluid communication with the gas conduit, wherein each flow path is coupled to one or more high speed actuating valves for enabling the cyclical layer deposition process, and a second gas distribution assembly coupled to the

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lid assembly and configured for a chemical vapor deposition process, comprising an annular mixing channel concentrically disposed about the gas conduit and in fluid communication with the gas conduit via one or more passageways, at least one nozzle connected to each of the one or more passageways and positioned to eject a gas into the gas conduit, and a first gas inlet positioned on an inner wall of the annular mixing channel to form a circular gas flow pattern for the gas within the annular mixing channel, as recited in claim 7, and claims dependant thereon.

Withdrawal of the rejection is respectfully requested.

Claims 6, 9 and 14 were rejected under 35 U.S.C. § 103(a) as being obvious over *Chen* in view of *Carducci*. Claims 6, 9 and 14 have been cancelled; therefore, the rejection is moot.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the claimed invention.

U.S. Patent No. 4,761,269, the secondary reference made of record, is noted. However, it is believed that the secondary reference is no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, the Applicant believes that a detailed discussion of the secondary reference is not necessary for a full and complete response to this office action.

Having addressed all issues set out in the office action, the Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

  
John-Paul F. Cherry  
Registration No. 57,323  
PATTERSON & SHERIDAN, L.L.P.  
3040 Post Oak Blvd. Suite 1500  
Houston, TX 77056  
Telephone: (713) 623-4844  
Facsimile: (713) 623-4846  
Attorney for the Applicant

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